

# EUROPEAN PATENT OFFICE

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TITLE : FET BIOSENSOR

ABSTRACT : PURPOSE: To obtain good reproducibility, by coating a substrate with an org. alkoxysilane polymer containing 20mol% or more of alkoxysilane wherein monovalent hydrocarbon having one or more of an amino group is directly bonded to a silicon atom.

CONSTITUTION: As an immobilizing membrane, an org. alkoxysilane polymer with MW of 800 or more based on trialkoxysilane, wherein monovalent hydrocarbon  $C_nH_{2n}$  having one or more of an amino group  $NH_2$  is directly bonded to a silicon atom Si, is used and applied to a substrate and cured. Next, the polymer coated substrate is immersed in a glutaraldehyde solution to convert the amino group on the surface thereof to a Schiff base or an aldehyde base. The alkoxysilane having the amino group remaining in the cured membrane surface is pref. 20mol% or more. A chip is cut from a wafer, wherein FET having a polyaminosiloxane membrane is formed to a gate part, and, after wire bonding, shaped to an FET sensor which is, in turn, immersed in an antibody or enzyme solution and the antibody or enzyme is immobilized and stabilized to obtain an immunological or enzyme sensor.

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